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Ser Asn Pro Tyr Ser Thr Ser Tyr Ser Gly Pro Tyr Pro Ala Ala Ala 60 65 70

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Gly Pro Tyr Pro Ala Ala Ala Pro Pro Val Pro Ala Ser Asn Tyr Pro 65 70 75 80

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t. U

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Ser Asn Pro Tyr Ser Thr Pro Tyr Ser Gly Pro Tyr Pro Ala Ala Ala 65 60

Pro Pro Leu Ser Ala Pro Asn Tyr Pro Thr Ile Ser Arg Pro Leu Ile 80 75

Cys Arg Phe Gly Tyr Gln Met Asp Glu Ser Asn Gln Cys Val Asp Val 100 95 90

Asp Glu Cys Ala Thr Asp Ser His Gln Cys Asn Pro Thr Gln Ile Cys 115 110

Ile Asn Thr Glu Gly Gly Tyr Thr Cys Ser Cys Thr Asp Gly Tyr Trp 130 125

Leu Leu Glu Gly Gln Cys Leu Asp Ile Asp Glu Cys Arg Tyr Gly Tyr 145 140

Cys Gln Gln Leu Cys Ala Asn Val Pro Gly Ser Tyr Ser Cys Thr Cys 160 155

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09/674379 534 Rec'd PCT/PTO 30 OCT 20007

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<210> 3

<211> 2233

<212> DNA

<213> Mus musculus

<220>

<223> Clone mouse A55 derived from Day 13 mouse embryonic heart

<220>

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Leu A	Ala	Leu	Trp	Leu	Pro	His	Pro	Gly	Asn	Ala	Gln	Gln	Gln	Cys	Thr	
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Arg	Gly	Pro	Tyr	Ser	Asn	Pro	Tyr	Ser	Thr	Ser	Tyr	Ser	G1 y	Pro	Tyr	
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cca	gca	gcg	gcc	cca	cca	gta	cca	gct	tcc	aac	tac	ccc	acg	att	tca	398
Pro	Ala	Ala	Ala	Pro	Pro	Val	Pro	Ala	Ser	Asn	Tyr	Pro	Thr	Ile	Ser	

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Arg Pro Leu Val Cys Arg Phe Gly Tyr Gln Met Asp Glu Gly Asn Gln

75

70

80

85

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tgt	gtg	gat	gtg	gac	gag	tgt	gca	aca	gac	tca	cac	cag	tgc	aac	cct	494
Cys	Val	Asp	Val	۸sp	Glu	Cys	۸la	Thr	Asp	Ser	His	Gln	Cys	Asn	Pro	
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Thr	Gln	Ile	Cys	Ile	Asn	Thr	Glu	Gly	Gly	Tyr	Thr	Cys	Ser	Cys	Thr	
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Arg	Tyr	Gly	Tyr	Cys	Gln	Gln	Leu	Cys	Ala	Asn	Val	Pro	Gly	Ser	Tyr	
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tcc	tgt	aca	tgc	aac	cct	ggt	ttc	acc	ctc	aac'	gac	gat	gga	agg	tct	686
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Cys	Gln	Asp	Val	Asn	Glu	Cys	Glu	Thr	Glu	Asn	Pro	Cys	Val	Gln	Thr	
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Cys	Val	Asn	Thr	Tyr	Gly	Ser		Ile	Cys	Arg	Cys		Pro	Gly	Tyr	
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Glu		Glu	Glu	Asp	Gly		His	Cys	Ser	Asp		Asp	Glu	Cys	Ser	
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ttc	tcc	gag	ttc	ctc	tgt	caa	cac	gag	tgt	gtg	aac	cag	ccg	ggc	tca	878

Phe Ser G	u Phe	Leu	Cys	Gln	His	Glu	Cys	Val	Asn	G1n	Pro	Gly	Ser	
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Tyr Phe C	s Ser	Cys	Pro	Pro	Gly	Tyr	Val	Leu	Leu	Asp	Asp	Asn	Arg	
		250	-				255					260		
agc tgc ca	ng gat	atc	aat	gaa	tgt	gag	cac	cga	aac	cac	acg	tgt	acc	974
Ser Cys G	ln Asp	Ile	Asn	Glu	Cys	G1u	His	Arg	Asn	His	Thr	Cys	Thr	
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Ser Leu G	ln Thr	Cys	Tyr	Asn	Leu	Gln	Gly	Gly	Phe	Lys	Cys	Ile	Asp	
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Thr Gly Pro Ile Ser Ala Thr Leu Val Met Thr Arg Pro Ile Lys Gly

375

380

385

cct cgg gac atc cag ctg gac ttg gag atg atc act gtc aac act gtc 1358

Pro Arg Asp Ile Gln Leu Asp Leu Glu Met Ile Thr Val Asn Thr Val

390 395 400 405

atc aac ttc aga ggc agc tcc gtg atc cga ctg cgg ata tat gtg tcg 1406

Ile Asn Phe Arg Gly Ser Ser Val Ile Arg Leu Arg Ile Tyr Val Ser

410
415
420

cag tat ccg ttc tgagcctctg gctaaggcct ctgacactgc ctttcaccag 1458
Gln Tyr Pro Phe

425

caccgaggga cgggaggaga aaggaaacca gcaagaatga gagcgagaca gacattgcac 1518

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<211> 423

<212> PRT

<213> Mus musculus

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35 40 45

Pro Val Tyr Arg Gly Pro Tyr Ser Asn Pro Tyr Ser Thr Ser Tyr Ser

50 55 60

Gly Pro Tyr Pro Ala Ala Ala Pro Pro Val Pro Ala Ser Asn Tyr Pro 65 70 75 80

Thr Ile Ser Arg Pro Leu Val Cys Arg Phe Gly Tyr Gln Met Asp Glu
85 90 95

Gly Asn Gln Cys Val Asp Val Asp Glu Cys Ala Thr Asp Ser His Gln
100 105 110

Cys Asn Pro Thr Gln Ile Cys Ile Asn Thr Glu Gly Gly Tyr Thr Cys
115 120 125

Ser Cys Thr Asp Gly Tyr Trp Leu Leu Glu Gly Gln Cys Leu Asp Ile 130 135 140

Asp Glu Cys Arg Tyr Gly Tyr Cys Gln Gln Leu Cys Ala Asn Val Pro

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Gly	Ser	Tyr	Ser	Cys	Thr	Cys	Asn	Pro	Gly	Phe	Thr	Leu	Asn	Asp	Λsp
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Val	Gln	Thr	Cys	Val	Asn	Thr	Tyr	Gly	Ser	Phe	Ile	Cys	Arg	Cys	Asp
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Pro	Gly	Tyr	Glu	Leu	Glu	Glu	Asp	Gly	Ile	His	Cys	Ser	Asp	Met	Asp
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Cys	Ile	Asp	Pro	Ile	Ser	Cys	Glu	Glu	Pro	Tyr	Leu	Leu	Ile	Gly	Glu
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Phe	Thr	Ile	Leu	Tyr	Arg	Asp	Met	Asp	Val	Val	Ser	Gly	Arg	Ser	Val
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Pro	Ala	Asp	Ile	Phe	Gln	Met	Gln	Ala	Thr	Thr	Arg	Tyr	Pro	Gly	Ala
			340					345					350		
Tvr	Tvr	Ile	Phe	Gln	He	Lvs	Ser	G1 v	Asn	Glu	Glv	Arg	Glu	Phe	Tyr

355

360

365

Met Arg Gln Thr Gly Pro Ile Ser Ala Thr Leu Val Met Thr Arg Pro
370 375 380

Ile Lys Gly Pro Arg Asp Ile Gln Leu Asp Leu Glu Met Ile Thr Val
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Asn Thr Val Ile Asn Phe Arg Gly Ser Ser Val Ile Arg Leu Arg Ile
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Tyr Val Ser Gln Tyr Pro Phe

420

<210> 5

<211> 1269

<212> DNA

<213> Mus musculus

<400> 5

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<211> 461

<212> PRT

<213> Mus musculus

<400> 6

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-20 -15 -10 -5

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Λla	Cys	Arg	Gly	Asp	Met	Met	Cys	Val	Λsn	Gln	Asn	Gly	Gly	Tyr	Leu
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Cys	Ile	Pro	Arg	Thr	Asn	Pro	Val	Tyr	Arg	Gly	Pro	Tyr	Ser	Asn	Pro
45					50					55					60
Tyr	Ser	Thr	Ser	Tyr	Ser	Gly	Pro	Tyr	Pro	Ala	Ala	Ala	Pro	Pro	Val
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Pro	Ala	Ser	Asn	Tyr	Pro	Thr	Ile	Ser	Arg	Pro	Leu	Val	Cys	Arg	Phe
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Phe	Thr	Leu	Asn	Asp	Asp	Gly	Arg	Ser	Cys	Gln	Asp	Val	Asn	Glu	Cys
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Glu	Thr	Glu	Asn	Pro	Cys	Val	Gln	Thr	Cys	Val	Asn	Thr	Tyr	Gly	Ser
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Phe	He	Cvs	Aro	Cvs	Asn	Pro	Glv	Tvr	Glu	Leu	Glu	Glu	Asp	Glv	He

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Leu	Val	Met	Thr	Arg	Pro	Ile	Lys	Gly	Pro	Arg	Asp	Ile	Gln	Leu	Asp
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Leu	Glu	Met	Ile	Thr	Val	Asn	Thr	Val	Ile	Asn	Phe	Arg	Gly	Ser	Ser
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415 420 425

<210> 7

<211> 1383

<212> DNA

<213> Mus musculus

<400> 7

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<210> 8

<211> 2429

<212> DNA

<213> Mus musculus

<220>

<223> Clone mouse A55b derived from Day 13 mouse embryonic heart

<220>

<221> CDS

<222> (232).. (1614)

<220>

<221> sig_peptide

<222> (232).. (339)

<220>

<221> mat_peptide <222> (340)..(1614)

<400> 8

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-35

45

cct aga agt ttc gag cca atg cac agt gga ctc tgc aga cag aga cgc 285Pro Arg Ser Phe Glu Pro Met His Ser Gly Leu Cys Arg Gln Arg Arg $-30 \qquad \qquad -25 \qquad \qquad -20$

atg ata ctc act gtt acc atc ttg gca ctc tgg ctt cca cat cct ggg 333Met Ile Leu Thr Val Thr Ile Leu Ala Leu Trp Leu Pro His Pro Gly $-15 \qquad -10 \qquad -5$

aat gca cag cag tgc aca aac ggc ttt gac ctg gac cgc cag tca 381 Asn Ala Gln Gln Gln Cys Thr Asn Gly Phe Asp Leu Asp Arg Gln Ser

-1 1 5 10

35

gga cag tgt cta gat att gat gaa tgc cgg acc atc cct gag gct tgt 429

Gly Gln Cys Leu Asp Ile Asp Glu Cys Arg Thr Ile Pro Glu Ala Cys

20 25 30

cgt ggg gac atg atg tgt gtc aac cag aat ggc ggg tat ttg tgc atc 477 Arg Gly Asp Met Met Cys Val Asn Gln Asn Gly Gly Tyr Leu Cys Ile

cct cga acc aac cca gtg tat cga ggg cct tac tca aat ccc tac tct 52

40

च्याच्या जीव क्या	ar a	क्र क्राप्त क	

Pro	Arg	Thr	Asn	Pro	Val	Tyr	Arg	Gly	Pro	Tyr	Ser	Asn	Pro	Tyr	Ser	
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Thr	Ser	Tyr	Ser	Gly	Pro	Tyr	Pro	Ala	Λla	Ala	Pro	Pro	Val	Pro	Ala	
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Ser	Asn	Tyr	Pro	Thr	Ile	Ser	Arg	Pro	Leu	Val	Cys	Arg	Phe	Gly	Tyr	
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Gln	Met	Asp	Glu	Gly	Asn	Gln	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Thr	
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Asp	Ser	His	Gln	Cys	Asn	Pro	Thr	Gln	Ile	Cys	Ile	Asn	Thr	Glu	Gly	
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Gly	Tyr	Thr	Cys	Ser	Cys	Thr	Asp	Gly	Tyr	Trp	Leu	Leu	Glu	Gly	Gln	
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tgc	cta	gat	att	gat	gaa	tgt	cgc	tat	ggt	tac	tgc	cag	cag	ctc	tgt	813
Cys	Leu	Asp	Ile	Asp	Glu	Cys	Arg	Tyr	Gly	Tyr	Cys	Gln	Gln	Leu	Cys	
		145					150					155				
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Ala	Asn	Val	Pro	Gly	Ser	Tyr	Ser	Cys	Thr	Cys	Asn	Pro	Gly	Phe	Thr	
	160					165					170					
ctc	aac	gac	gat	gga	agg	tct	tgc	caa	gat	gtg	aac	gag	tgc	gaa	act	909
Leu	Asn	Asp	Asp	Gly	Arg	Ser	Cys	Gln	Asp	Val	Asn	Glu	Cys	Glu	Thr	
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gag aat ccc tgt gtt cag acc tgt gtc aac acc tat ggc tct ttc atc 957 Glu Asn Pro Cys Val Gln Thr Cys Val Asn Thr Tyr Gly Ser Phe Ile 200 195 205 tgc cgc tgt gac cca gga tat gaa ctt gag gaa gat ggc att cac tgc 1005 Cys Arg Cys Asp Pro Gly Tyr Glu Leu Glu Glu Asp Gly Ile His Cys 220 210 215 agt gat atg gac gag tgc agc ttc tcc gag ttc ctc tgt caa cac gag 1053 Ser Asp Met Asp Glu Cys Ser Phe Ser Glu Phe Leu Cys Gln His Glu 225 230 235 tgt gtg aac cag ccg ggc tca tac ttc tgc tcg tgc cct cca ggc tac 1101 Cys Val Asn Gln Pro Gly Ser Tyr Phe Cys Ser Cys Pro Pro Gly Tyr 240 245 250 gtc ctg ttg gat gat aac cga agc tgc cag gat atc aat gaa tgt gag 1149 Val Leu Leu Asp Asp Asn Arg Ser Cys Gln Asp Ile Asn Glu Cys Glu 255 265 270 260 cac cga aac cac acg tgt acc tca ctg cag act tgc tac aat cta caa 1197 His Arg Asn His Thr Cys Thr Ser Leu Gln Thr Cys Tyr Asn Leu Gln 285 275 280 ggg ggc ttc aaa tgt att gat ccc atc agc tgt gag gag cct tat ctg 1245 Gly Gly Phe Lys Cys Ile Asp Pro Ile Ser Cys Glu Glu Pro Tyr Leu 290 300 295 ctg att ggt gaa aac cgc tgt atg tgt cct gct gag cac acc agc tgc 1293 Leu Ile Gly Glu Asn Arg Cys Met Cys Pro Ala Glu His Thr Ser Cys 305 310 315 aga gac cag cca ttc acc atc ctg tat cgg gac atg gat gtg gtg tca 1341 Arg Asp Gln Pro Phe Thr Ile Leu Tyr Arg Asp Met Asp Val Val Ser

330 320 325 gga cgc tcc gtt cct gct gac atc ttc cag atg caa gca aca acc cga 1389 Gly Arg Ser Val Pro Ala Asp Ile Phe Gln Met Gln Ala Thr Thr Arg 345 350 335 340 tac cct ggt gcc tat tac att ttc cag atc aaa tct ggc aac gag ggt 1437 Tyr Pro Gly Ala Tyr Tyr Ile Phe Gln Ile Lys Ser Gly Asn Glu Gly 355 360 365 cga gag ttc tat atg cgg caa aca ggg cct atc agt gcc acc ctg gtg 1485 Arg Glu Phe Tyr Met Arg Gln Thr Gly Pro Ile Ser Ala Thr Leu Val 380 370 375 atg aca cgc ccc atc aaa ggg cct cgg gac atc cag ctg gac ttg gag 1533 Met Thr Arg Pro Ile Lys Gly Pro Arg Asp Ile Gln Leu Asp Leu Glu 390 395 385 atg atc act gtc aac act gtc atc aac ttc aga ggc agc tcc gtg atc 1581 Met Ile Thr Val Asn Thr Val Ile Asn Phe Arg Gly Ser Ser Val Ile 400 405 410 cga ctg cgg ata tat gtg tcg cag tat ccg ttc tgagcctctg gctaaggcct 1634 Arg Leu Arg Ile Tyr Val Ser Gln Tyr Pro Phe 420 425 415 ctgacactgc ctttcaccag caccgaggga cgggaggaga aaggaaacca gcaagaatga 1694 gagogagaca gacattgcac ctttcctgct gaatatctcc tgggggcatc agcctagcat 1754 cttgacccat atctgtacta ttgcagatgg tcactctgaa ggacaccctg ccctcagttc 1814 ctatgatgca gttatccaaa agtgttcatc ttagcccctg atatgaggtt gccagtgact 1874

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ggggtatgag teetegaagg tteaaaagae tgagtggett geteteacet etteetete 1994

tteeteeate tettgetgea ttgetgettt geaaaagtee teatgggete gtgggaaatg 2054

GAOL TALA MATERIE

ctgggaatag ctagtttgct tcttgcatgt tctgagaagg ctatgggaac acaccacagc 2114
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<210> 9

<211> 423

<212> PRT

<213> Mus musculus

<400> 9

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Met Cys Val Asn Gln Asn Gly Gly Tyr Leu Cys Ile Pro Arg Thr Asn
35 40 45

Pro Val Tyr Arg Gly Pro Tyr Ser Asn Pro Tyr Ser Thr Ser Tyr Ser
50 55 60

Gly Pro Tyr Pro Ala Ala Ala Pro Pro Val Pro Ala Ser Asn Tyr Pro 65 70 75 80

Thr Ile Ser Arg Pro Leu Val Cys Arg Phe Gly Tyr Gln Met Asp Glu

				85					90					95	
Gly	Asn	G1n	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Thr	Asp	Ser	His	Gln
			100					105					110		
Cys	Asn	Pro	Thr	Gln	Ile	Cys	Ile	Asn	Thr	Glu	Gly	Gly	Tyr	Thr	Cys
		115					120					125			
Ser	Cys	Thr	Asp	Gly	Tyr	Trp	Leu	Leu	Glu	Gly	Gln	Cys	Leu	Asp	Ile
	130					135					140				
Asp	Glu	Cys	Arg	Tyr	Gly	Tyr	Cys	Gln	Gln	Leu	Cys	Ala	Asn	Val	Pro
145					150					155					160
Gly	Ser	Tyr	Ser	Cys	Thr	Cys	Asn	Pro	Gly	Phe	Thr	Leu	Asn	Asp	Asp
				165					170					175	
Gly	Arg	Ser	Cys	G1n	Asp	Val	Asn	Glu	Cys	Glu	Thr	Glu	Asn	Pro	Cys
			180					185					190		
Val	G1n	Thr	Cys	Val	Asn	Thr	Tyr	Gly	Ser	Phe	Ile	Cys	Arg	Cys	Asp
		195					200					205			
Pro	G1y	Tyr	Glu	Leu	Glu	Glu	Asp	Gly	Ile	His	Cys	Ser	Asp	Met	Asp
	210					215					220				
Glu	Cys	Ser	Phe	Ser	Glu	Phe	Leu	Cys	G1n	His	G1u	Cys	Val	Asn	Gln
225					230					235					240
Pro	Gly	Ser	Tyr	Phe	Cys	Ser	Cys	Pro	Pro	G.1 y	Tyr	Val	Leu	Leu	Asp
				245					250					255	
Asp	Asn	Arg	Ser	Cys	Gln	Asp	Ile	Asn	Glu	Cys	Glu	His	Arg	Asn	His
			260					265					270		
Thr	Cys	Thr	Ser	Leu	Gln	Thr	Cys	Tyr	Asn	Leu	Gln	G1y	Gly	Phe	Lys
		275					280					285			
Cvs	He	Asn	Pro	He	Ser	Cvs	Glu	Glu	Pro	Tvr	Leu	Leu	He	G1 v	Glu

and the first of the

Asn Arg Cys Met Cys Pro Ala Glu His Thr Ser Cys Arg Asp Gln Pro Phe Thr Ile Leu Tyr Arg Asp Met Asp Val Val Ser Gly Arg Ser Val Pro Ala Asp Ile Phe Gln Met Gln Ala Thr Thr Arg Tyr Pro Gly Ala Tyr Tyr Ile Phe Gln Ile Lys Ser Gly Asn Glu Gly Arg Glu Phe Tyr Met Arg Gln Thr Gly Pro Ile Ser Ala Thr Leu Val Met Thr Arg Pro Ile Lys Gly Pro Arg Asp Ile Gln Leu Asp Leu Glu Met Ile Thr Val Asn Thr Val Ile Asn Phe Arg Gly Ser Ser Val Ile Arg Leu Arg Ile Tyr Val Ser Gln Tyr Pro Phe

⟨210⟩ 10

<211> 1269

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<213> Mus musculus

<400> 10

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<210> 11

<211> 448

<212> PRT

a ser ans a surraul

<213> Homo sapiens

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Leu	Pro	Ser	Pro	Gly	Asn	Ala	G1n	Лlа	Gln	Cys	Thr	Asn	Gly	Phe	Asp
		-5				-1	1				5				
Leu	Asp	Arg	Gln	Ser	Gly	Gln	Cys	Leu	Asp	Ile	Asp	Glu	Cys	Arg	Thr
10					15					20					25
Ile	Pro	Glu	Ala	Cys	Arg	Gly	Asp	Met	Met	Cys	Val	Asn	Gln	Asn	Gly
				30					35					40	
Gly	Tyr	Leu	Cys	Ile	Pro	Arg	Thr	Asn	Pro	Val	Tyr	Arg	Gly	Pro	Tyr
			45					50					55		
Ser	Asn	Pro	Tyr	Ser	Thr	Pro	Tyr	Ser	Gly	Pro	Tyr	Pro	Ala	Ala	Ala
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Pro	Pro	Leu	Ser	Ala	Pro	Asn	Tyr	Pro	Thr	Ile	Ser	Arg	Pro	Leu	Ile
	75					80					85				
Cys	Årg	Phe	Gly	Tyr	G1n	Met	Asp	Glu	Ser	Asn	G1n	Cys	Val	Asp	Val
90					95					100					105
Asp	Glu	Cys	Ala	Thr	Asp	Ser	His	Gln	Cys	Asn	Pro	Thr	Gln	Ile	Cys
				110					115					120	
Ile	Asn	Thr	Glu	Gly	Gly	Tyr	Thr	Cys	Ser	Cys	Thr	Asp	Gly	Tyr	Trp
			125					130					135		
Leu	Leu	Glu	Gly	Gln	Cys	Leu	Asp	Ile	Asp	Glu	Cys	Arg	Tyr	Gly	Tyr
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Cys	Gln	Gln	Leu	Cys	Ala	Asn	Val	Pro	Gly	Ser	Tyr	Ser	Cys	Thr	Cys

	155					160					165				
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170					175					180					185
Asn	Glu	Cys	Ala	Thr	G1u	Asn	Pro	Cys	Val	G1n	Thr	Cys	Val	Asn	Thr
				190					195					200	
Tyr	Gly	Ser	Phe	Ile	Cys	Arg	Cys	Asp	Pro	Gly	Tyr	Glu	Leu	Glu	Glu
			205					210					215		
Asp	Gly	Val	His	Cys	Ser	Asp	Met	Asp	Glu	Cys	Ser	Phe	Ser	Glu	Phe
		220					225					230			
Leu	Cys	Gln	His	Glu	Cys	Val	Asn	Gln	Pro	Gly	Thr	Tyr	Phe	Cys	Ser
	235					240					245				
Cys	Pro	Pro	Gly	Tyr	Ile	Leu	Leu	Asp	Asp	Asn	Arg	Ser	Cys	Gln	Asp
250				*	255					260					265
Ile	Asn	Glu	Cys	Glu	His	Arg	Asn	His	Thr	Cys	Asn	Leu	Gln	Gln	Thr
				270					275					280	
Cys	Tyr	Asn	Leu	Gln	Gly	G1y	Phe	Lys	Cys	Ile	Asp	Pro	Ile	Arg	Cys
			285					290					295		
Glu	Glu	Pro	Tyr	Leu	Arg	Ile	Ser	Asp	Asn	Arg	Cys	Met	Cys	Pro	Ala
		300					305					310			
Glu	Asn	Pro	Gly	Cys	Arg	Asp	G1n	Pro	Phe	Thr	Ile	Leu	Tyr	Arg	Asp
	315					320					325				
Met	Asp	Val	Val	Ser	Gly	Arg	Ser	Val	Pro	Ala	Asp	Ile	Phe	Gln	Met
330					335					340					345
Gln	Ala	Thr	Thr	Arg	Tyr	Pro	Gly	Ala	Tyr	Tyr	Ile	Phe	Gln	Ile	Lys
				350					355					360	
Ser	Gly	Asn	Glu	Gly	Arg	Glu	Phe	Tyr	Met	Arg	Gln	Thr	Gly	Pro	Ile

365 370 375

Ser Ala Thr Leu Val Met Thr Arg Pro Ile Lys Gly Pro Arg Glu Ile 380 385 390

Gln Leu Asp Leu Glu Met Ile Thr Val Asn Thr Val Ile Asn Phe Arg
395 400 405

Gly Ser Ser Val Ile Arg Leu Arg Ile Tyr Val Ser Gln Tyr Pro Phe 410 415 420 425

<210> 12

<211> 1344

<212> DNA

<213> Homo sapiens

<400> 12

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<210> 13

<211> 2328

<212> DNA

<213> Homo sapiens

<220>

<223> Clone human A55 derived from human brain

<220>

<221> CDS

<222> (169).. (1512)

<220>

<221> sig_peptide

<222> (169)..(237)

<220>

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<400> 13

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-23

ata aaa agg ata ctc act gtt acc att ctg gct ctc tgt ctt cca agc 225

Ile Lys Arg Ile Leu Thr Val Thr Ile Leu Ala Leu Cys Leu Pro Ser

-20 -15 -10 -5

cct ggg aat gca cag gca cag tgc acg aat ggc ttt gac ctg gat cgc 273 Pro Gly Asn Ala Gln Ala Gln Cys Thr Asn Gly Phe Asp Leu Asp Arg

-1 1 5 10

cag tca gga cag tgt tta gat att gat gaa tgc cga acc atc ccc gag 321 Gln Ser Gly Gln Cys Leu Asp Ile Asp Glu Cys Arg Thr Ile Pro Glu

15 20 25

gcc tgc cga gga gac atg atg tgt gtt aac caa aat ggc ggg tat tta 369 Ala Cys Arg Gly Asp Met Met Cys Val Asn Gln Asn Gly Gly Tyr Leu

30 35 40

tgc	att	ccc	cgg	aca	aac	cct	gtg	tat	cga	ggg	ccc	tac	tcg	aac	ccc	417
Cys	Ile	Pro	Arg	Thr	Asn	Pro	Val	Tyr	۸rg	Gly	Pro	Tyr	Ser	Asn	Pro	
45					50					55					60	
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Ser	Ala	Pro	Asn	Tyr	Pro	Thr	Ile	Ser	Arg	Pro	Leu	Ile	Cys	Arg	Phe	
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gga	tac	cag	atg	gat	gaa	agc	aac	caa	tgt	gtg	gat	gtg	gac	gag	tgt	561
Gly	Tyr	Gln	Met	Asp	Glu	Ser	Asn	Gln	Cys	Val	Asp	Val	Asp	Glu	Cys	
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gca	aca	gat	tcc	cac	cag	tgc	aac	ccc	acc	cag	atc	tgc	atc	aat	act	609
Ala	Thr	Asp	Ser	His	Gln	Cys	Asn	Pro	Thr	Gln	Ile	Cys	Ile	Asn	Thr	
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gaa	ggc	ggg	tac	acc	tgc	tcc	tgc	acc	gac	gga	tat	tgg	ctt	ctg	gaa	657
Glu	G1y	G1y	Tyr	Thr	Cys	Ser	Cys	Thr	Asp	Gly	Tyr	Trp	Leu	Leu	Glu	
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Gly	G1n	Cys	Leu	Asp	Ile	Asp	Glu	Cys	Arg	Tyr	Gly	Tyr	Cys	Gln	G1n	
				145					150					155		
ctc	tgt	gcg	aat	gtt	cct	gga	tcc	tat	tct	tgt	aca	tgc	aac	cct	ggt	753
Leu	Cys	Ala	Asn	Val	Pro	Gly	Ser	Tyr	Ser	Cys	Thr	Cys	Asn	Pro	Gly	
			160					165					170			
ttt	acc	ctc	aat	gag	gat	gga	agg	tct	tgc	caa	gat	gtg	aac	gag	tgt	801
Phe	Thr	Leu	Asn	Glu	Asp	Gly	Arg	Ser	Cys	Gln	Asp	Val	Asn	Glu	Cys	

		175					180					185				
gcc	acc	gag	aac	ccc	tgc	gtg	caa	acc	tgc	gtc	aac	acc	tac	ggc	tct	849
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ttc	atc	tgc	cgc	tgt	gac	cca	gga	tat	gaa	ctt	gag	gaa	gat	ggc	gtt	897
Phe	Ile	Cys	Arg	Cys	Лsp	Pro	Gly	Tyr	Glu	Leu	Glu	Glu	Asp	Gly	Val	
205					210					215					220	
cat	tgc	agt	gat	atg	gac	gag	tgc	agc	ttc	tct	gag	ttc	ctc	tgc	caa	945
His	Cys	Ser	Asp	Met	Asp	Glu	Cys	Ser	Phe	Ser	Glu	Phe	Leu	Cys	Gln	
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cat	gag	tgt	gtg	aac	cag	ссс	ggc	aca	tac	ttc	tgc	tcc	tgc	cct	cca	993
His	Glu	Cys	Val	Asn	Gln	Pro	Gly	Thr	Tyr	Phe	Cys	Ser	Cys	Pro	Pro	
			240					245					250			.~
ggc	tac	atc	ctg	ctg	gat	gac	aac	cga	agc	tgc	caa	gac	atc	aac	gaa	1041
Gly	Tyr	Ile	Leu	Leu	Asp	Asp	Asn	Arg	Ser	Cys	Gln	Asp	Ile	Asn	Glu	
		255					260					265				
tgt	gag	cac	agg	aac	cac	acg	tgc	aac	ctg	cag	cag	acg	tgc	tac	aat	1089
Cys	Glu	His	Arg	Asn	His	Thr	Cys	Asn	Leu	Gln	G1n	Thr	Cys	Tyr	Asn	
	270					275					280					
tta	caa	ggg	ggc	ttc	aaa	tgc	atc	gac	ссс	atc	cgc	tgt	gag	gag	cct	1137
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285					290					295					300	
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Tyr	Leu	Arg	Ile	Ser	Asp	Asn	Arg	Cys	Met	Cys	Pro	Ala	Glu	Asn	Pro	
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Gly	Cys	Arg	Лsp	Gln	Pro	Phe	Thr	Ile	Leu	Tyr	Arg	Asp	Met	Asp	Val	
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gtg	tca	gga	cgc	tcc	gtt	ccc	gct	gac	atc	ttc	caa	atg	caa	gcc	acg	1281
Val	Ser	Gly	Arg	Ser	Val	Pro	Λla	Asp	Ile	Phe	Gln	Met	Gln	Ala	Thr	
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Thr	Arg	Tyr	Pro	Gly	Ala	Tyr	Tyr	Ile	Phe	Gln	Ile	Lys	Ser	Gly	Asn	
	350					355					360					
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				385					390					395		
ttg	gaa	atg	atc	act	gtc	aac	act	gtc	atc	aac	ttc	aga	ggc	agc	tcc	1473
Leu	Glu	Met	Ile	Thr	Val	Asn	Thr	Val	Ile	Asn	Phe	Arg	Gly	Ser	Ser	
			400					405					410			
gtg	atc	cga	ctg	cgg	ata	tat	gtg	tcg	cag	tac	cca	ttc	tga	gccto	egg	1522
Val	Ile	Arg	Leu	Arg	Ile	Tyr	Val	Ser	Gln	Tyr	Pro	Phe				
		415					420					425				
gctg	ggago	cct c	cgac	gctg	gc ct	ctca	ttgg	cac	caag	gga (cagga	agaag	ga ga	nggaa	ataa	1582
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ttag	ggtti	tgc g	gggg	tctg	ga gt	ctat	gttc	aaa	gact	gtg a	acag	gctte	gc tg	gtcac	ttct	1882

teacetette cacteettet eteactgtgt tactgetttg caaagaceeg ggagetggeg 1942 gggaaceetg ggagtageta gtttgetttt tgegtacaea gagaaggeta tgtaaacaaa 2002 ceacageagg ategaagggt ttttagagaa tgtgttteaa aaceatgeet ggtatttea 2062 aceataaaag aagttteagt tgteettaaa tttgtataae ggtttaatte tgtettgtte 2122 attttgagta tttttaaaaa atatgtegta gaatteette gaaaggeett cagacacatg 2182 etatgttetg tetteecaaa eeeagtetee teteeatttt ageeeagtgt tttettgag 2242 gaeeeettaa tettgettte tttagaattt ttaeeeaatt ggattggaat geagaggtet 2302 eeaaactgat taaatatttg aagaga

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<211> 423

<212> PRT

<213> Homo sapiens

<400> 14

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Asp Ile Asp Glu Cys Arg Thr Ile Pro Glu Ala Cys Arg Gly Asp Met
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Met Cys Val Asn Gln Asn Gly Gly Tyr Leu Cys Ile Pro Arg Thr Asn
35 40 45

Pro Val Tyr Arg Gly Pro Tyr Ser Asn Pro Tyr Ser Thr Pro Tyr Ser

50 55 60

Gly Pro Tyr Pro Ala Ala Ala Pro Pro Leu Ser Ala Pro Asn Tyr Pro 65 70 75 80

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Ser	Asn	G1n	Cys	Val	Лsp	Val	Лsp	Glu	Cys	Λla	Thr	Asp	Ser	His	Gln
			100					105					110		
Cys	Asn	Pro	Thr	Gln	Ile	Cys	Ile	Asn	Thr	Glu	Gly	Gly	Tyr	Thr	Cys
		115	-				120					125			
Ser	Cys	Thr	Asp	Gly	Tyr	Trp	Leu	Leu	Glu	Gly	Gln	Cys	Leu	Asp	Ile
	130					135					140				
Asp	Glu	Cys	Arg	Tyr	Gly	Tyr	Cys	Gln	Gln	Leu	Cys	Ala	Asn	Val	Pro
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Gly	Ser	Tyr	Ser	Cys	Thr	Cys	Asn	Pro	Gly	Phe	Thr	Leu	Asn	Glu	Asp
				165					170					175	
Gly	Arg	Ser	Cys	Gln	Asp	Val	Asn	Glu	Cys	Ala	Thr	Glu	Asn	Pro	Cys
			180					185					190		
Val	Gln-	Thr	Cys	Val	Asn	Thr	Tyr	Gly	Ser	Phe	Ile	Cys	Arg	Cys	Asp
		195		÷			200					205			
Pro	Gly	Tyr	Glu	Leu	Glu	Glu	Asp	Gly	Val	His	Cys	Ser	Asp	Met	Asp
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225					230					235					240
Pro	Gly	Thr	Tyr	Phe	Cys	Ser	Cys	Pro	Pro	Gly	Tyr	Ile	Leu	Leu	Asp
				245					250					255	
Asp	Asn	Arg	Ser	Cys	Gln	Asp	Ile	Asn	Glu	Cys	Glu	His	Arg	Asn	His
			260					265					270		
Thr	Cys	Asn	Leu	Gln	Gln	Thr	Cys	Tyr	Asn	Leu	Gln	Gly	Gly	Phe	Lys
		275					280					285			

Cys Ile Asp Pro Ile Arg Cys Glu Glu Pro Tyr Leu Arg Ile Ser Asp Asn Arg Cys Met Cys Pro Ala Glu Asn Pro Gly Cys Arg Asp Gln Pro Phe Thr Ile Leu Tyr Arg Asp Met Asp Val Val Ser Gly Arg Ser Val Pro Ala Asp Ile Phe Gln Met Gln Ala Thr Thr Arg Tyr Pro Gly Ala Tyr Tyr Ile Phe Gln Ile Lys Ser Gly Asn Glu Gly Arg Glu Phe Tyr Met Arg Gln Thr Gly Pro Ile Ser Ala Thr Leu Val Met Thr Arg Pro Ile Lys Gly Pro Arg Glu Ile Gln Leu Asp Leu Glu Met Ile Thr Val Asn Thr Val Ile Asn Phe Arg Gly Ser Ser Val Ile Arg Leu Arg Ile Tyr Val Ser Gln Tyr Pro Phe

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<212> DNA

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<210> 16

<211> 35

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<213> Artificial Sequence

<220>

 $\langle 223 \rangle$ Description of Artificial Sequence:Primer

<400> 16

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35

<210> 17

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

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<400> 17

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27